



# JMPS-M

## *External Interfaces*



# Outline



- What does the term External Interface mean?
- How do External Interfaces relate to External Dependencies?
- Who is working External Interfaces?
- Why are we working External Interfaces?
- How is NAVAIR WD set up to support JMPS-M (Maritime) External Interfaces?



# JMPS-M External Interfaces POC



- Ancina Stevens
  - JMPS Maritime External Interfaces Coordinator
  - Phone: 805-989-5269/7425
  - Email: [ancina.stevens@navy.mil](mailto:ancina.stevens@navy.mil)



# External Interface Defined



- **External**
  - Not intrinsic or essential
  - Of or relating to dealings or relationships with foreign organizations
- **Interface**
  - The place which independent systems meet and act on or communicate with each other
  - Common boundary between two or more items of equipment



# External Interface Defined



- JMPS External Interface
  - Connection between JMPS framework or JMPS common components and an independent system or piece of data
  - Not part of basic JMPS mission planning
- Major External Interface Categories
  - System
    - Software (requires software, provided or developed, on JMPS)
    - Browser (requires only a Browser on JMPS)
  - Data
    - Flat file, XML file, various media types
    - NIMA products, GPS Almanac, etc.



# External Interface Process



- PMA-233/NAVAIR WD oversight
- Forum for information exchange
- Lay the groundwork for JMPS External Dependency roadmap

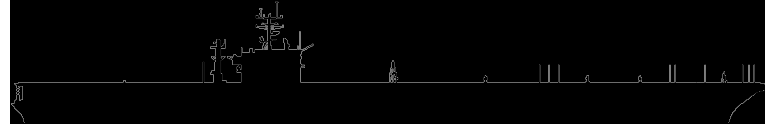
*Ancina Stevens is the JMPS External Interfaces Cat Herder!*



# External Interface Process



- Focus on JC1 carrier-based interfaces first
- Expand to include Navy Expeditionary OPS interfaces next

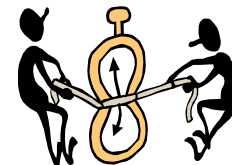




# External Interface Challenges



- Many external systems and data
  - Multiple external program offices and contractors
  - 'Squeaky wheel gets the grease'
  - Priorities should be driven by user requirements
  - Agreements (some firm...some loose)
- Funding
  - Especially life cycle maintenance support of the software providing the interface (both sides)
- Schedule synchronization
  - Everyone's schedule changes (both sides)
- Technical issues, including inter- and intra-ship/shore connectivity







# Schedule Synchronization



- Schedule
  - Development
    - Difficult enough
  - Fielding
    - Sometimes impossible due to the D-30 process for ship installations



***Sometimes 'close enough' is the best you can achieve.***



# System Development



- External interfaces
  - Implementation of certain system requirements
- Oversight of external interfaces
  - Spans the entire system development life-cycle
  - Covers all aspects of system development
    - Hardware
    - Software
    - Documentation
    - Data support

Requirements -> Design -> Development -> Test -> Fielding



# JMPS External Interface Tasks



- Requirements
  - Become familiar with ORD and basic user requirements and be on the lookout for ways to satisfy those requirements
- Design/Development
  - Identify POCs for technical information
  - Review system-level documentation
- Test
  - Perform testing, when needed
  - Identify external system hardware and software required for testing the interface or facilitate a remote connection
- Care and Feeding
  - Perform a routine pulse check on existing and potential external interfaces and document risks, problem areas, etc.
- Library
  - Compile an electronic library for all external interfaces and update monthly



# System Integration



- JC1 System Integration Phases
  - Planning
  - Execution
  - Assessment



# JMPS JC1 Integration Tasks



	Planning Phase	JC1 Integration Execute Phase	Assessment Phase
JMPE	<ul style="list-style-type: none"><li>•Prepare Integration Plan</li><li>•Identify test hardware suite</li><li>•Analyze source code issues</li><li>•Analyze DRs</li></ul>	<ul style="list-style-type: none"><li>•Analyze defects/metrics</li><li>•Recommend test focus</li></ul>	<ul style="list-style-type: none"><li>•Waiver assessments</li><li>•Prepare final report</li></ul>
CM	<ul style="list-style-type: none"><li>•Prepare CM Plan</li><li>•Build JMPS CD (all configs)</li><li>•Baseline Core software</li></ul>	<ul style="list-style-type: none"><li>•Inject patches into baseline</li><li>•Rebuild/reinstall systems</li><li>•Troubleshooting</li></ul>	
UPC	<ul style="list-style-type: none"><li>•Prepare UPC Integration Plan</li></ul>	<ul style="list-style-type: none"><li>•UPC coordination/assist</li></ul>	<ul style="list-style-type: none"><li>•UPC evaluation forms</li></ul>
Ext. Sys.	<ul style="list-style-type: none"><li>•Identify external systems</li><li>•Obtain external systems</li><li>•Install/Config. External systems</li></ul>	<ul style="list-style-type: none"><li>•Maintain external systems</li></ul>	
Test	<ul style="list-style-type: none"><li>•Prepare Integration test plan</li><li>•Prepare test point matrix</li></ul>	<ul style="list-style-type: none"><li>•Perform integration test</li><li>•Capture defects</li><li>•Collect metrics</li></ul>	<ul style="list-style-type: none"><li>•Test Perf. Assessment</li></ul>
QA	<ul style="list-style-type: none"><li>•Prepare Integration QA plan</li><li>•Peer Review Integration plans</li></ul>	<ul style="list-style-type: none"><li>•Verify entry criteria met</li><li>•Verify defect reports</li><li>•Verify exit criteria met</li></ul>	

■Artifact

■Task



# JMPS JC1 Integration Tasks



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JMPE	<ul style="list-style-type: none"><li>• Prepare Integration Plan</li><li>• Identify test hardware suite</li><li>• Analyze source code issues</li><li>• Analyze DRs</li></ul>	<ul style="list-style-type: none"><li>• Analyze defects/metrics</li><li>• Recommend test focus</li></ul>	<ul style="list-style-type: none"><li>• Waiver assessments</li><li>• Prepare final report</li></ul>
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- Artifact
- Task





# JMPS Schedule

4 JAN 03



- Expectation: No un-mitigated PR 1, 2's, spec 3 & 4s
- Entry: MTBOMF  $\geq$  30 hrs

## JV1 (CLIN 100- 108)

Rs=32,  
IPRs=65)

9/23 12/2 12/6 12/13  
5.2 5.3

NGIT  
Freeze  
Baseline

1/20  
5.3A

1/31

2/7

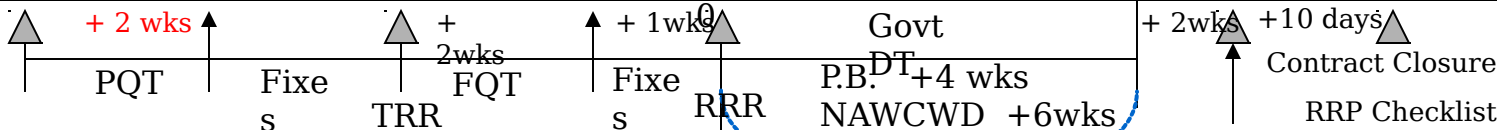
B6.

Same RLS criteria as any other  
beta

3/17

3/31

4/14



JV1 fixes roll directly into JC1 build from  
B6.0 on

Assessment of fixes  
done here

Delta DT

## JV1 (CLIN 132)

(GDRs=68,  
IPRs=69)

Fix capacity  
for approx 325  
PR's  
(137 planned)

JC1



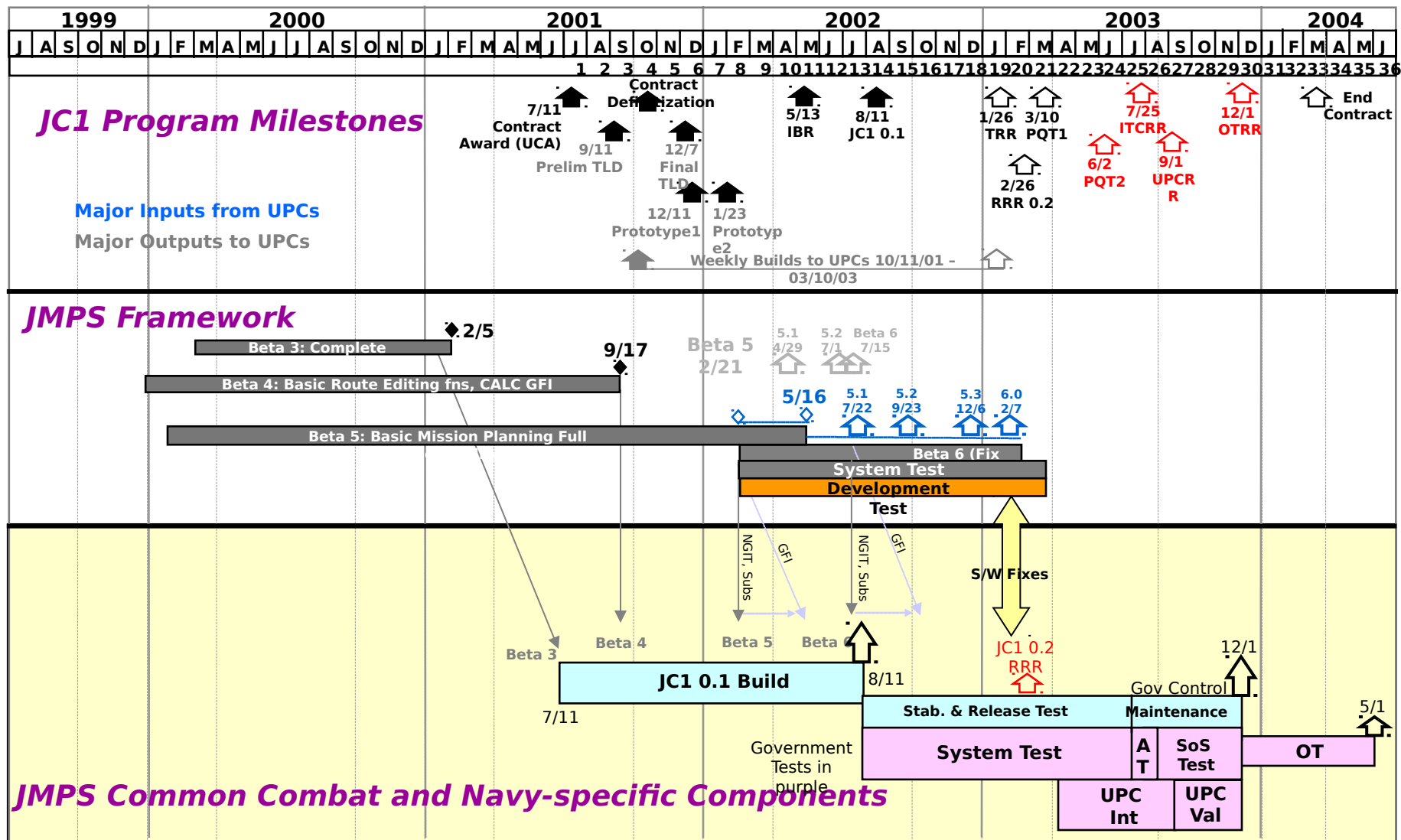
Based on JV1  
B5.3

Based on JV1  
B6.0





# JMPS Master Schedule (proposed - Jan 2003)





# External Systems Test Schedule



- JV1
  - From Beta 5 on, verify the JMPS/GCCS-M interface with each build being tested
    - Total of 8 JV1 builds from Aug 02 through Jan 03
- JC1
  - To be supplied

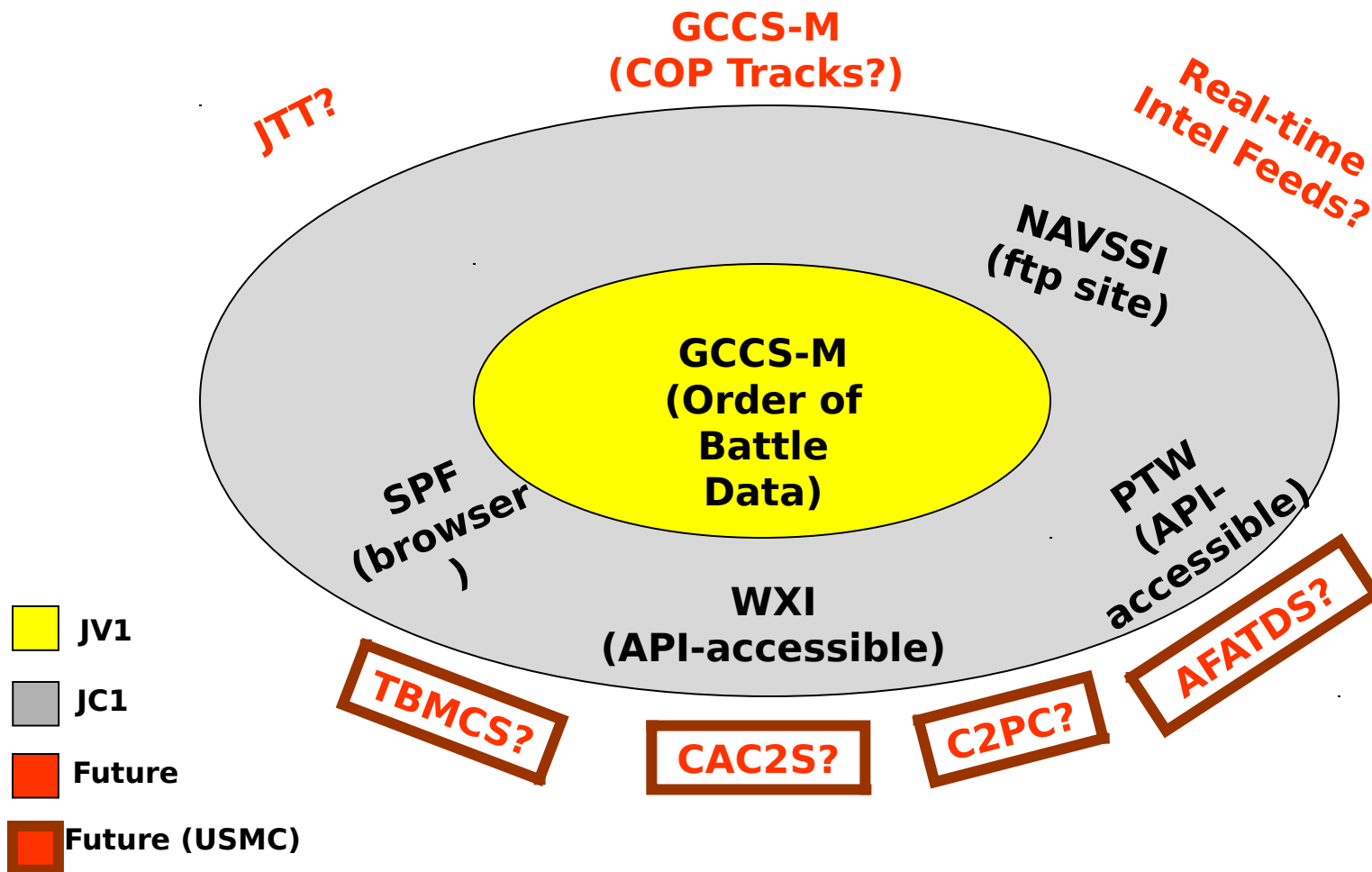


# ***JMPS-M External Interfaces***



# JMPS-M

## External 'System' Interfaces



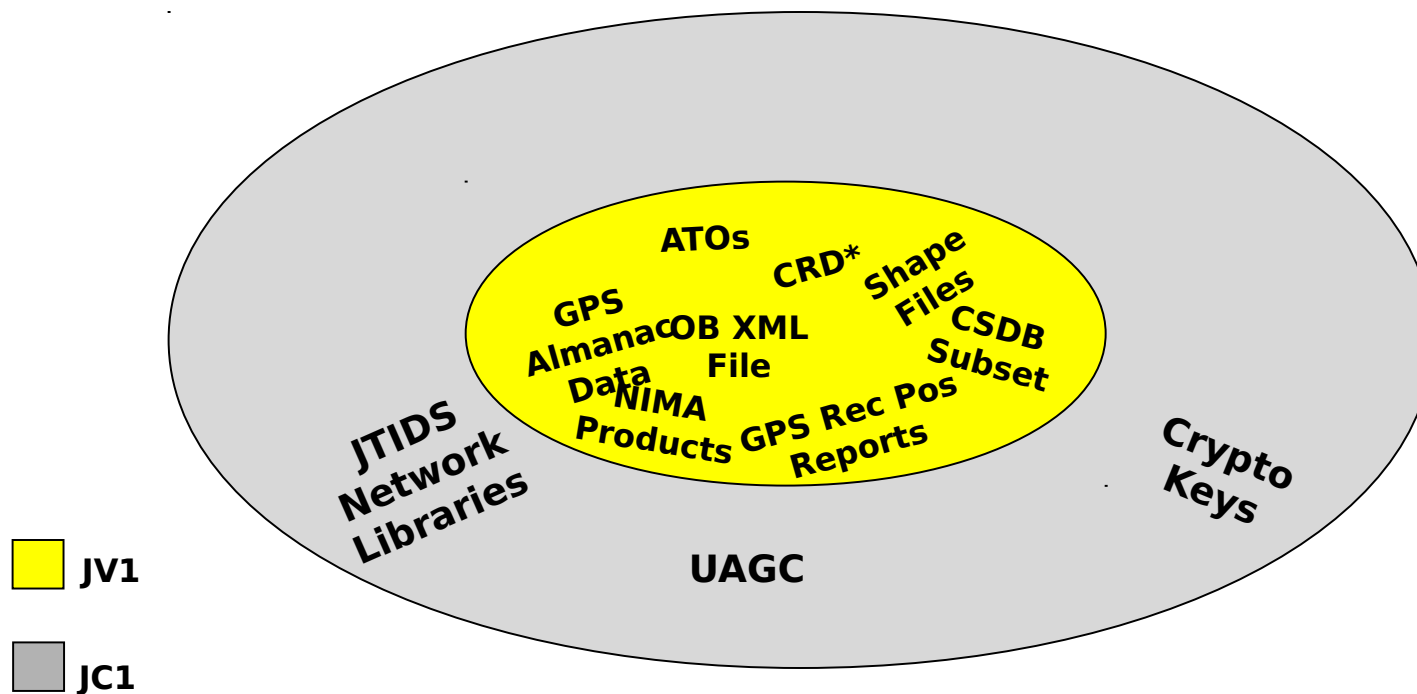


# JMPS-M

## External 'Data' Interfaces



FPMs and Mission Binders?



**\*All are import data interfaces except CRD, which is both import and export.**



# JMPS External Interface POCs



- Navy
  - Ancina Stevens (Navy Coordinator)
    - Mary Collins (GCCS-M, Intel Data)
    - Matt Becker (NAVSSI, GPS Almanac Data)
  - Major Will Bentley (USMC Exp Ops)
    - Requirements still evolving
  - LCDR Pat Waring (METOC/NIMA)
  - China Lake IBAR Lab
    - Darin Martin
  - Point Mugu Lab
    - Joe Orosco



# External Interface Summary



SYSTEM/DATA	DESCRIPTION	S/D	J V1	J C1	FUTURE	REQ	METHOD	J MPS POC	COMMENTS
AFATDS	Advanced Field Artillery Tactical Data System				X			Maj Will Bentley	Exp Ops
ATO/ACO/ATOCONF	USMTF Air Tasking Order, Air Combat Order, Air Tasking Order Confirmation Message	D	X	X				Matt Jensen	
C2PC	Command and Control PC				X			Maj Will Bentley	Exp Ops - related to GCCS Track Data
CAC2S	Common Aviation Command and Control System				X			Maj Will Bentley	Exp Ops
CRD	Common Route Definition	D	X	X				David Tartt	
Crypto Keys		D						Stuart Stratton	
CSDB Subset	Combat System Data Base	D	X	X			File Import	Ancina Stevens	web site:
<b>GCCS-M</b>	<b>Global Command and Control System-Maritime</b>	<b>S</b>	<b>X</b>	<b>X</b>			<b>J MPS GUI Request</b>	<b>Mary Collins</b>	<b>Currently only MOB (SAM, AAA) and EO/EB equipment</b>
GPS ALMANAC	Global Positioning System Almanac Data	D	X	X				Matt Becker	Yuma and Navstar formats supported
GPS POSITS	Global Positioning System Position Reports	D	X	X			Data feed on COM port	Matt Becker	Precision Lightweight GPS Receivers (PLGRs) built since 1993 are supported in J MPS. Interface uses the NMEA-0183 industry standard GPS interface (serial port).
J NL	J TIDS Network Library			X				Ann Gross	
J TT	Joint Targeting Toolkit				X			Mary Collins	
<b>NAVSSI</b>	<b>Navigation Sensor System Interface</b>	<b>S</b>		<b>X</b>			<b>J MPS GUI</b>	<b>Matt Becker</b>	
NIMA MCG&I	National Imagery and Mapping Agency Mapping, Charting, Geodesy and Imagery	D	X	X				LCDR Pat Waring	
OB XML File	Order of Battle eXtensible Markup Language File	D	X	X			File Import	Mary Collins	
<b>PTW</b>	<b>Precision Targeting Workstation</b>	<b>S</b>		<b>X</b>			<b>API ONLY</b>	<b>Ancina Stevens</b>	
Real-time Data Feeds	Real-time Data Feeds				X			Mary Collins	PFPS 3.2 capability - Birddog Tools
SHAPEFILE		D	X	X				Sharon Spielman	
<b>SPF</b>	<b>Strike Planning Folder</b>	<b>S</b>		<b>X</b>			<b>BROWSER</b>	<b>Ancina Stevens</b>	
TBMCS	Theater Battle Management Core System				X			Maj Will Bentley	Exp Ops
TOPSCENE	Tactical Operation SCENE							Ancina Stevens	Used as a test tool for CRD data exchange
<b>WXI (METCAST)</b>	<b>METeoro logic broadCAST</b>	<b>S</b>		<b>X</b>			<b>API ONLY</b>	<b>Ancina Stevens</b>	
WXI (UAGC)	Upper Air Gridded Climatology			X				Ancina Stevens	

**\*\*As of 27 Jan 2003\*\***



# Test Procedures



SYSTEM/DATA	J V1	J C1	FUTURE	METHOD	NGIT TESTER	GOVT TESTER (J V1)
AFATDS			X			
ATO/ACO/ATOCONF	Manage ATO Data	Standalone Import/Export Standalone (Data Types) Server Walkaway			Cindy Nguyen	Stanley Lefkowitz
C2PC			X			
CAC2S			X			
CRD	Exchange Mission Data	X	X		Lynn Diamond	David Tartt
Crypto Keys						
CSDB Subset	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		File Import		Ancina Stevens
GCCS-M	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		J MPS GUI Request	Steve Allen	Ancina Stevens
GPS ALMANAC	Manage GPS Almanac	Update GPS Almanac Server Walkaway			Michael Chiang	Matt Becker
GPS POSITS	Manage GPS Almanac	Update GPS Almanac Server Walkaway		Data feed on COM port	Michael Chiang	Matt Becker
J NL		Maintain J TIDS				Sharon Spielman
J TT			X			
NAVSSI		X		J MPS GUI		Matt Becker
NIMA MCG&	Manage DAFIF Data				Richard Nguyen Jim Sra	
OB XML File	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		File Import	Steve Allen	Ancina Stevens
PTW		Interface to PTW Server Walkaway		API ONLY	Lynn Diamond	Steve Crawford
Real-time Data Feeds			X			
SHAPEFILE		Define Planning Workspace Server Walkaway				
SPF		Interface to SPF		BROWSER	Lynn Diamond	Steve Crawford
TBMCS			X			
TOPSCENE		Exchange Mission Data Weather				David Tartt
WXI (METCAST)		Standalone Import/Export Standalone (Data Types)		API ONLY	Lynn Diamond	Erika Ocampo (to be reassigned)
WXI (UAGC)						
MISSION BINDERS		Mission Binders (MB) MB Backup/Restore Standalone Import/Export Standalone (Data Types) Server Walkaway			Michael Chiang	Joe Orosco

\*\*As of 27 Jan 2003\*\*





# External Systems Non-JMPS POCs



SYSTEM/DATA	DESCRIPTION	PROGRAM POC	TECHNICAL POC	UPC PGM	ENGRG DROP	OT COMP	IOC
AFATDS	Advanced Field Artillery Tactical Data System						
ATO/ACO/ATOCONF	USMTF Air Tasking Order, Air Combat Order, Air Tasking Order Confirmation Message						
C2PC	Command and Control PC						
CAC2S	Common Aviation Command and Control System						
CRD	Common Route Definition						
Crypto Keys							
CSDB Subset	Combat System Data Base						
<b>GCCS-M</b>	<b>Global Command and Control System-Maritime</b>	<b>Will Landenberg (610)260-4217 / (610)662-4390</b>	<b>Donna Snow (NGIT-Phila) (610)260-4264</b>	<b>All PGMs</b>			
GPS ALMANAC	Global Positioning System Almanac Data						
GPS POSITS	Global Positioning System Position Reports						
JNL	JTIDS Network Library						
JTT							
<b>NAVSSI</b>	<b>Navigation Sensor System Interface</b>	<b>Patrick Truver (PMW-156) (619) 524-7767</b>	<b>Ladd McCoy ladd.mccoy@titan. Com</b>				
NIMA MCG&I	National Imagery and Mapping Agency Mapping, Charting, Geodesy and Imagery						
OB XML File	Order of Battle eXtensible Markup Language File						
<b>PTW</b>	<b>Precision Targeting Workstation</b>	<b>Carl Rhoad (PMA 281) (703)866-4000</b>	<b>Brad Cordill (BAE) (858) 592-5358</b>	<b>SLAM J SOW</b>			
Real-time Data	Real-time Data Feeds						
SHAPEFILE							
<b>SPF</b>	<b>Strike Planning Folder</b>	<b>Matt Worthington (PMA 281) (703) 414-3858</b>	<b>Jerald Barker (BAE) (858) 592-5662</b>				
TBMCS	Theater Battle Management Core System						
TOPSCENE	Tactical Operation SCENE	Alan Herod (PMA 205) (301) 757-8136	Steve Perkins (Lockheed) (972) 603-9001				
<b>WXI (METCAST)</b>	<b>METeorologic broadCAST</b>	<b>Pat Waring (NAVAIR) (301) 342-0086 waringpl@navair.navy.mil</b>		<b>J SOW</b>			
WXI (UAGC)							b

**\*\*As of 27 Jan 2003\*\***



# IBAR External Systems



SYSTEM	DESCRIPTION	TYPE (QTY)	SOFTWARE VERSION(S)
C2PC	Command and Control PC	GCCS-M 3.x client	
GCCS-M	Global Command and Control System-Maritime	GCCS-M 3.x Server GCCS-M 4.2 Server	3.1.2.1 4.X
PTW	Precision Targeting Workstation	PTW Server (3) PTW Heavy Client (2) PTW Thin Client (2) PTW Rack Mount (1)	3.2 - 4.1 - 4.1.1a 4.1 - 4.1.1a 4.1 - 4.1.1a 4.1.1a
SPF	Strike Planning Folder	PTW Server 4.01 PTW Server 4.1	SPF SPF Build 6

*\*\*As of 27 Jan 2003\*\**



# GCCS-M



- **Global Command Control System - Maritime (GCCS-M)** is a single, integrated, scaleable Command, Control, Communication, Computer, and Intelligence (C4I) system that receives, displays, correlates, fuses and maintains geo-locational track information on friendly, hostile, and neutral land, sea and air forces and integrates it with available intelligence and environmental information.

***GCCS-M/JV1*** Interface - allows JMPS users with DBA role to query for current threat Order of Battle data (SAM, AAA, and EOB equipment) from GCCS-M's tactically-relevant MIDB and returns the results in XML. This results can then be saved to the JMPS database and made available to all JMPS users and UPCs.



# NAVSSI



- The AN/SSN-6 **Navigation Sensor System Interface (NAVSSI)** system is an integrated shipboard system that automatically accepts, processes, and disseminates navigation and time information from various shipboard navigation sources. The AN/SSN-6 provides a means for mission planners to obtain data verification, digital mapping, and the programming of selected way points. One of the navigation data products includes a GPS almanac file NAVSTAR.alm. This almanac data is used by platforms that require GPS navigation.

**NAVSSI/JC1** Interface - allows a JMPS user to download current GPS Almanac data from a NAVSSI ftp site on a LAN/WAN.



# PTW



• **Joint Service Imagery Processing System - Navy (JSIPS-N) Precision Targeting Workstation (PTW)** provides imagery, Mission Target Folders and other targeting information to assist the planner in generating missions.

***PTW/JC1*** Interface – allows a JMPS UPC to query for the following products:

- EO, IR, and SAR Imagery (NITF 2.0 Expanded Format)
- Automated Target Acquisition (ATA) Images
- Point Position Information Products (PPIP)
- Target Area Model (TAM) Images\*
- Target Folders with Visual Targeting Aids (VTS) and/or ATA Images

The ***PTW/JC1*** interface also supports ATA product generation requests and the exporting of retrieved products to UPC directories.

There is no user interface in JMPS related to the PTW interface. It can only be used programmatically by a UPC. A test driver, provided by BAE Systems, is used for testing prior to UPCs being available.

\*Note: TAM, ISAM, SWAM, ER, and SOW UPCs are expected to use the PTW interface.



# SPF



- **Strike Planning Folder (SPF)** functions as a mission/data repository storing routes, threat information, intelligence, weather, Air Tasking Orders (ATO), Rules of Engagement (ROE), and briefing material. Routes are stored in SPF in the Common Route Definition (CRD) format.

***SPF/JC1*** Interface - allows JMPs users to access, view, and use information held in the SPF repository via a Web Browser. There really is no interface of data to/from SPF except what can be done using normal Windows functionality.



# WXI (METCAST)



- **ME**Teorologic **bro**ad**CAST** (**METCAST**) is a request-reply and subscription system for distributing weather information extracted from the Tactical Environment Data Server (TEDS) database.

***METCAST/JC1*** Interface - allows a *JMPS* UPC to query for current and forecasted weather data.

*There is no user interface in JMPS related to the METCAST interface. It can only be used programmatically by a UPC. A test driver, provided by BAE Systems, is used for testing prior to UPCs being available. Currently, the JSOW UPC is expected to use the JMPS interface for METCAST data.*



# Additional 'Systems'



- TOPSCENE
- TAMPS
- PFPS





# TOPSCENE



- **Tactical Operational Scene (TOPSCENE)** is a 3-dimensional (3-D) scene generator used to simulate the route of flight. The system generates a dynamic 3-D representation based on specific route information, ground elevation data, imagery and threat data.

*TOPSCENE can import routes in CRD format and is used for testing JMPS CRD export functionality in JMPS.*



# ***JMPS/GCCS-M Interface***



# JMPS/GCCS-M Interface



- Requirement
  - Electronic interface to GCCS-M for the purpose of obtaining current GCCS-M threat data
    - Electronic Order of Battle
      - Radar equipment
    - Missile Order of Battle
      - Surface-to-Air Missile (SAM) equipment
      - Anti-Aircraft Artillery (AAA) equipment



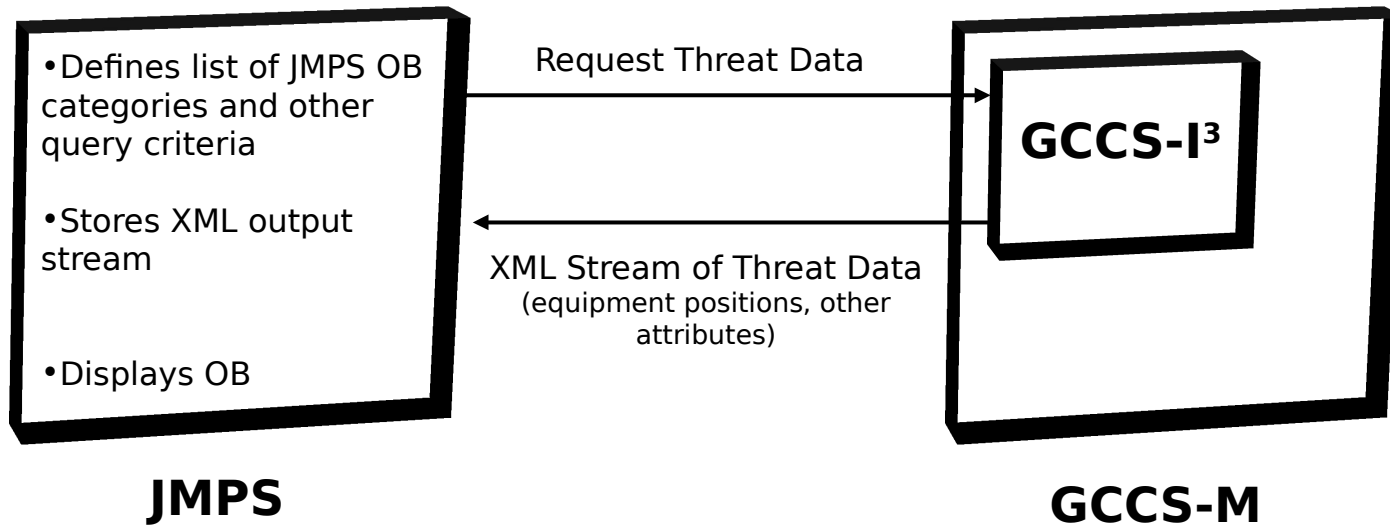
# JV1/GCCS-M Interface



- Interface to GCCS-M from JMPS
  - The GCCS-M Data Access Layer XMLSearch API is used by the JMPS software to request the required threat data across the LAN
  - Not currently available to the mission planner without giving the planner additional privileges
  - Ultimate source of the data is the equipment portion of the GCCS-M MIDB data base
- Processing of the Data on JMPS
  - Upon receipt of the threat data, JMPS saves the threat data set for subsequent use by the mission planner
  - More than a single 'GCCS-M-generated' data set can be saved
- Usage of the Data on JMPS
  - Available to mission planner as a data set that can be used within a planning session

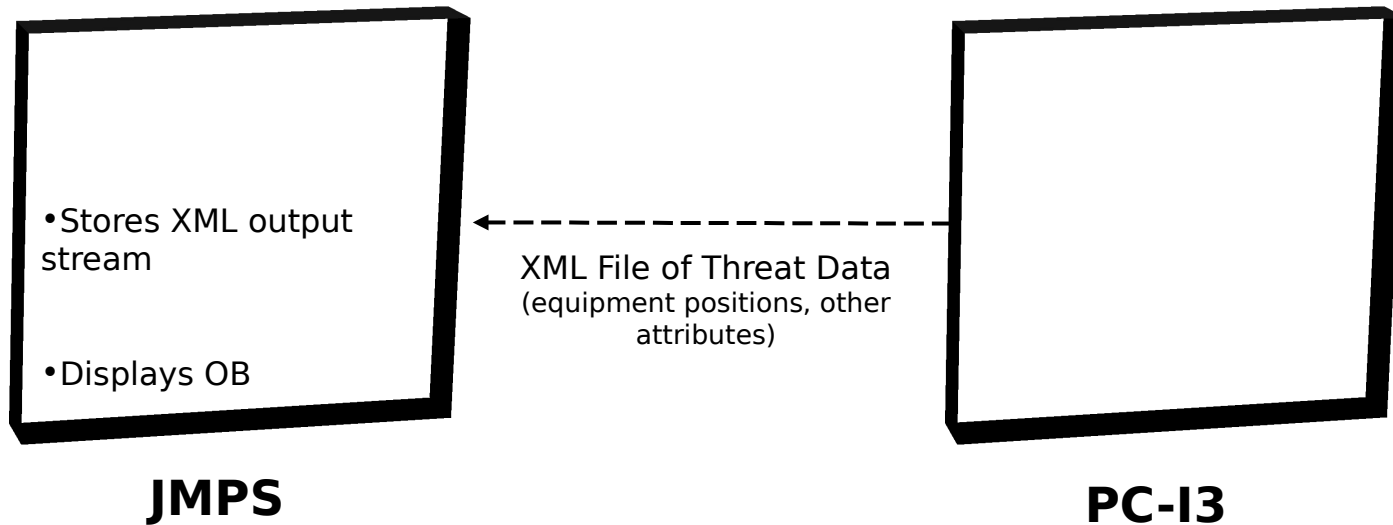


# JV1 Implementation (Navy CONOPS)





# JV1 Implementation (Air Force CONOPS)





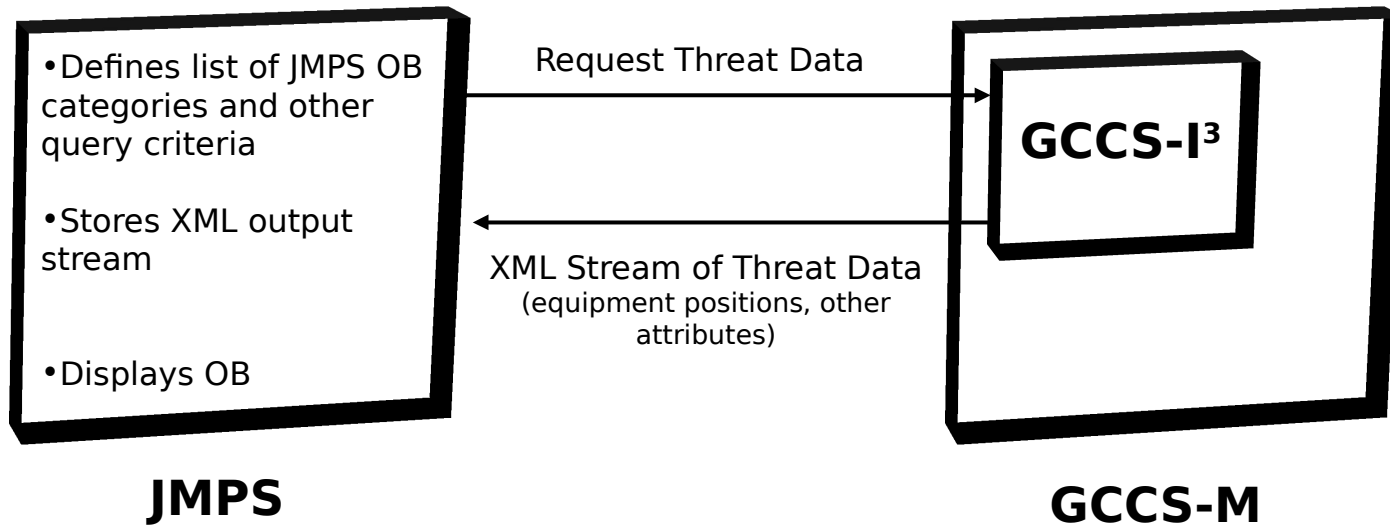
# JC1/GCCS-M Interface



- Interface to GCCS-M from JMPS
  - A revised GCCS-M Data Access Layer XMLSearch API is used by the JMPS software to request the required threat data across the LAN
  - Not currently available to the mission planner without giving the planner additional privileges
  - Ultimate source of the data is the equipment portion of the GCCS-M MIDB data base
    - The BE\_NUMBER and CATEGORY elements of any associated facilities are also planned to be retrieved
- Processing of the Data on JMPS
  - Upon receipt of the threat data, JMPS saves the threat data set for subsequent use by the mission planner
  - More than a single 'GCCS-M-generated' data set can be saved
- Usage of the Data on JMPS
  - Available to mission planner as a data set that can be used within a planning session



# JC1 Implementation (Navy CONOPS)

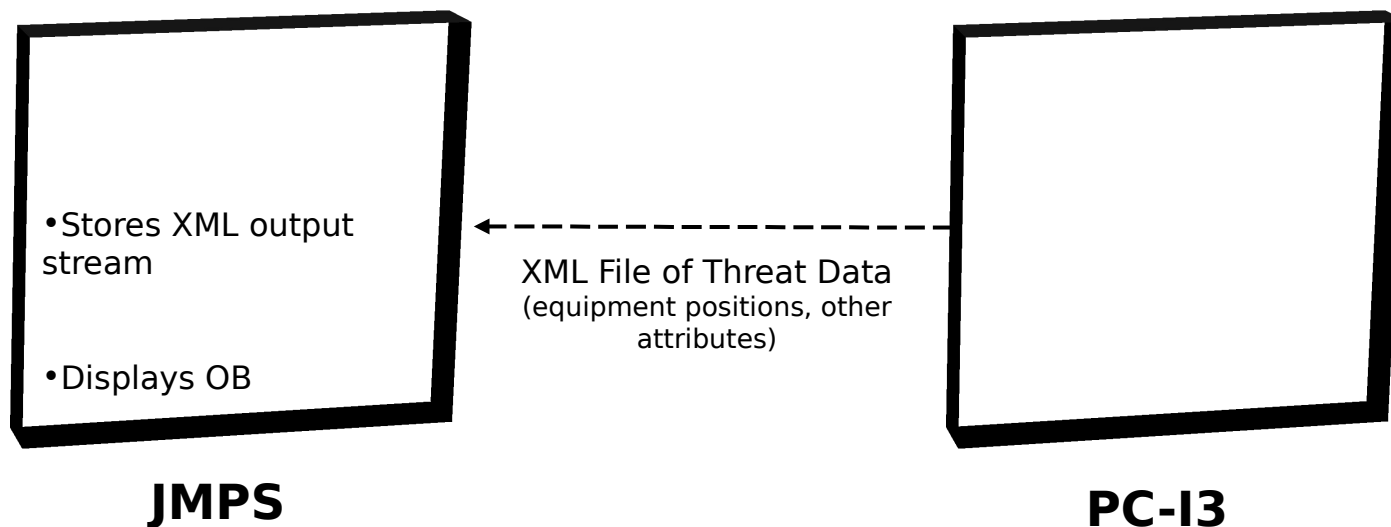


Note: The only change between JV1 and JC1 is the low-level packaging of the request and the addition of BE\_NUMBER and CATEGORY as attributes requested and stored by JMPS.





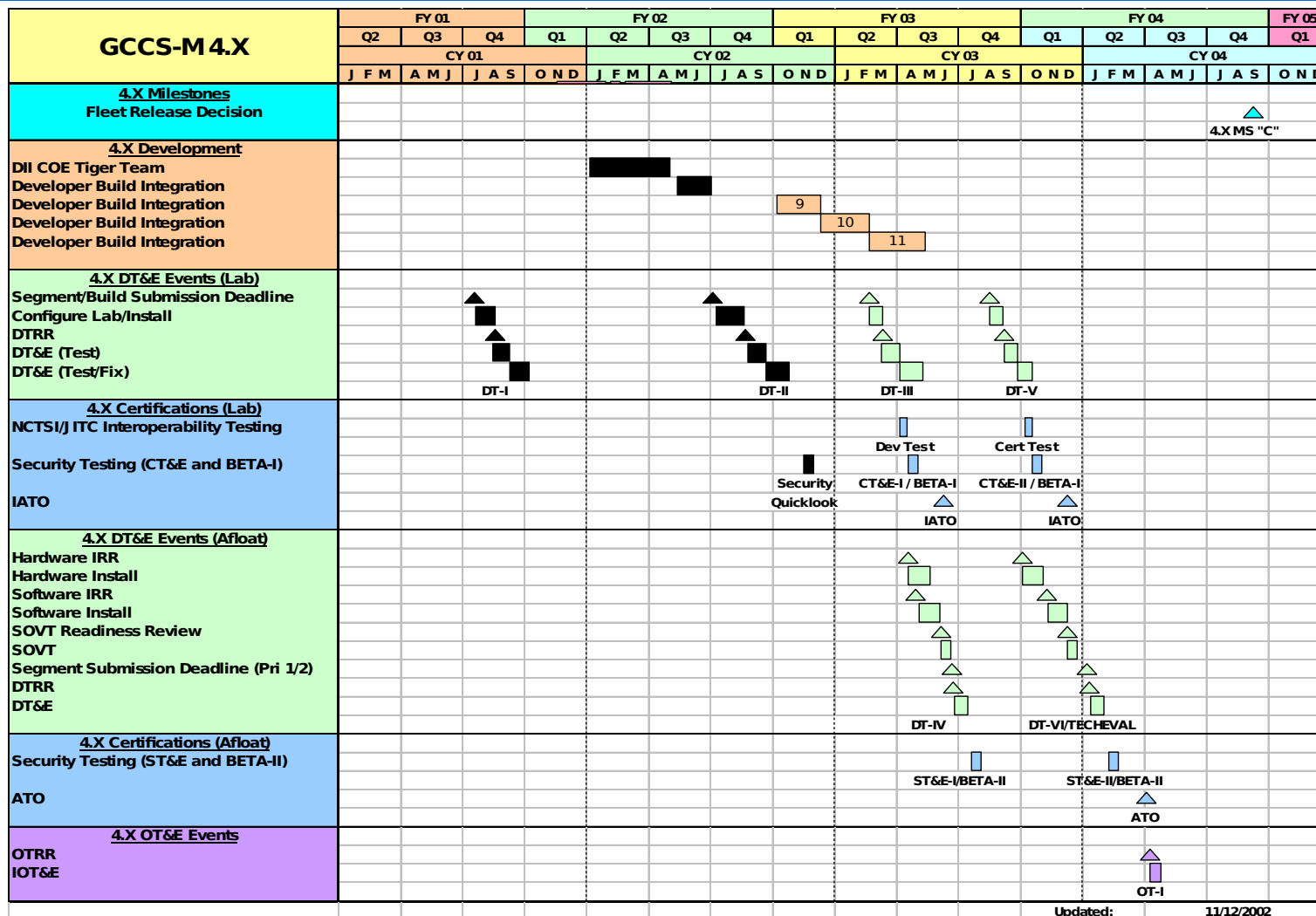
# JC1 Implementation (Air Force CONOPS)



Note: The only change between JV1 and JC1 is that BE\_NUMBER and CATEGORY are stored by JMPS.



# GCCS-M 4.X Schedule



Note: Afloat DT on USS Wasp scheduled for April 2003.



# GCCS-M Future Plans



- Transition to new GCCS-M CDE XML interface
  - Currently under development
- Eliminate the XMLSearch interface
  - Agreement to maintain the XMLSearch interface as long as JMPS requires it

*Systems Engineering Team Participation?*



# JMPS/GCCS-M Interface Issues



- DAL changes due to security
  - Username and password
  - Certificate
- Installation of GCCS-M 4.X DAL for operational use
  - JC1 risk #178
  - Formal letter from PMA-233 being worked
- Availability of GCCS-M 4.X software
  - GCCS-M Software MOA in place
  - Jan 02 version being used for JV1 development and JV1/JC1 test
  - Version with DAL security changes is not yet available



# ***JMPS/NAVSSI Interface***



# ***JMPS/PTW Interface***



# JMPS/PTW Interface



- Requirement
  - Query and retrieval of the following PTW imagery and products:
    - Imagery (in NITF 2.0 Expanded Format)
    - Automated Target Acquisition (ATA) Images
    - Point Position Information Products (PPIP)
    - Target Area Model (TAM) Images\*
    - Target Folders with Visual Targeting Aids (VTA) and/or ATA Images.
  - The PTW Interface also supports ATA product generation requests and the exporting of retrieved products to UPC directories

\*Note: TAM Images will not be supported by PTW as of PTW 4.2



# JMPS/PTW Interface



- PTW 4.1
  - Interfaces with JC1 in old CGI format
  - Patch ? Installed at IBAR China Lake
- PTW 4.1.1
  - Interfaces with JC1
    - old CGI format
    - new XML format
  - Not yet installed at IBAR China Lake





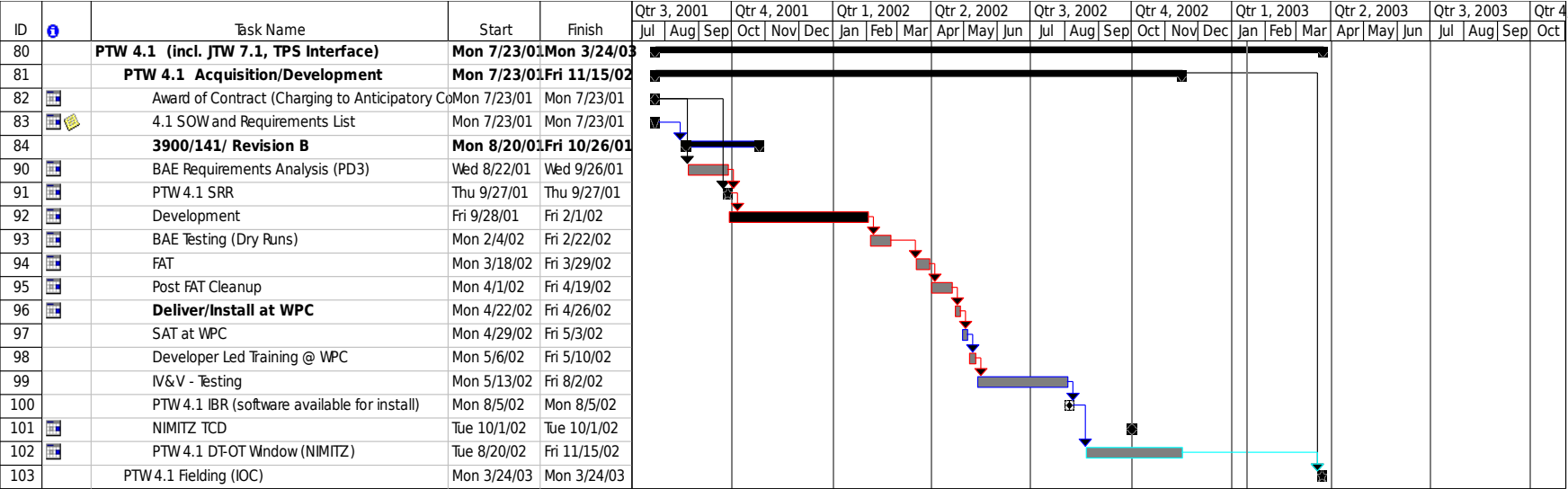
# JMPS/PTW Interface Key Dates



- PTW 4.1.1 – 1/2/02->12/5/03
  - 4.1.1a – Nov 02 install at WPC
  - 4.1.1 – Mar 03 install at WPC
    - ETF Web
    - System Tasking (XML interface for JMPS)
- PTW 4.1 installs
  - TBD



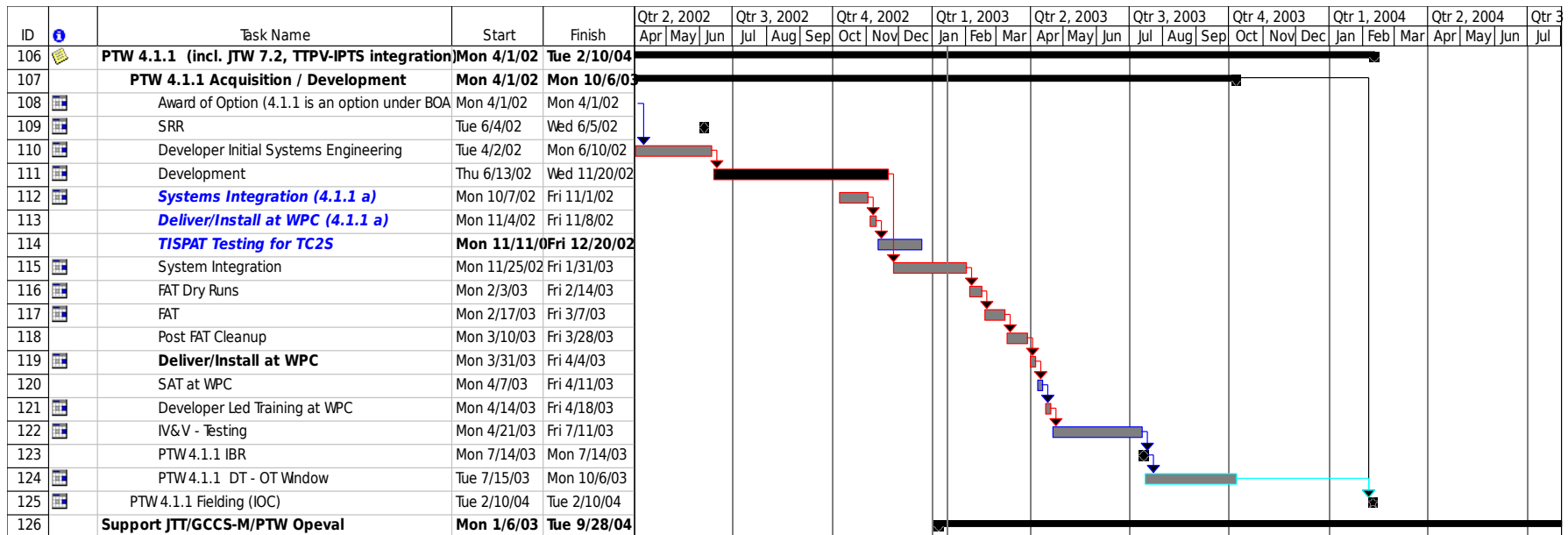
# PTW 4.1 Schedule



Last Schedule Revision -  
9/19/02



# PTW 4.1.1 Schedule



Last Schedule Revision -  
9/19/02



# PTW 4.2 Schedule



ID	Task Name	Start	Finish	Qtr 1, 2003			Qtr 2, 2003			Qtr 3, 2003			Qtr 4, 2003			Qtr 1, 2004			Qtr 2, 2004			Qtr 3, 2004			Qtr 4, 2004			Qtr 1, 2005			Qtr 2, 2005
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
127	PTW 4.2 Acquisition/Development	Mon 1/6/03	Mon 5/24/04																												
128	AOC	Mon 1/6/03	Mon 1/6/03																												
129	PTW 4.1.2 Development	Tue 1/7/03	Tue 1/7/03																												
130	Development	Mon 1/6/03	Fri 9/26/03																												
131	BAE Testing	Mon 9/29/03	Fri 10/17/03																												
132	FAT	Mon 10/20/03	Fri 10/31/03																												
133	Install at WPC	Mon 11/24/03	Thu 11/27/03																												
134	Developer Training	Fri 11/28/03	Thu 12/4/03																												
135	IV&V - Testing	Fri 12/5/03	Thu 2/26/04																												
136	PTW 4.2 IBR	Mon 3/1/04	Mon 3/1/04																												
137	PTW 4.2 DT-OT Window	Tue 3/2/04	Mon 5/24/04																												
138	PTW 4.2 Fielding	Tue 9/28/04	Tue 9/28/04																												

Last Schedule Revision -  
9/19/02

Note: TAM Images will not be supported by PTW as of PTW 4.2



# PTW External Schedule Drivers



ID	Task Name	Start	Finish	Qtr 2, 2000			Qtr 3, 2000			Qtr 4, 2000			Qtr 1, 2001			Qtr 2, 2001			Qtr 3, 2001			Qtr 4, 2001			Qtr 1, 2002			Qtr 2, 2002			Qtr 3
				Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
171	<b>External Schedule Drivers</b>	<b>Mon 4/3/00</b>	<b>Wed 6/23/00</b>																												
172	<b>TAMPS</b>	<b>Wed 8/1/01</b>	<b>Wed 8/1/01</b>																												
173	TAMPS 6.2.1/JTIM	Wed 8/1/01	Wed 8/1/01																												
174	<b>JTT</b>	<b>Thu 3/1/01</b>	<b>Mon 9/3/01</b>																												
177	<b>VISUAL SERVICES</b>	<b>Wed 5/17/00</b>	<b>Fri 7/25/03</b>																												
223	<b>External Tests</b>	<b>Fri 6/1/01</b>	<b>Wed 6/23/04</b>																												
224	SHARP OA	Mon 3/11/02	Fri 4/26/02																												
225	<b>TIS Test on Nimitz</b>	<b>Fri 8/2/02</b>	<b>Thu 10/3/02</b>																												
226	SHARP Techeval	Mon 1/6/03	Fri 3/28/03																												
227	<b>SHARP Opeval</b>	<b>Tue 5/13/03</b>	<b>Mon 6/9/03</b>																												
228	GCCS-M 4.x (Roosevelt)	Fri 6/1/01	Fri 6/1/01																												
229	<b>GCCS/JTT/PTW Opeval</b>	<b>Thu 4/1/04</b>	<b>Wed 6/23/04</b>																												
230	<b>Common Data Client</b>	<b>Thu 11/30/00</b>	<b>Wed 2/21/01</b>																												
231	Implement CDC on Coronado for FBE-I	Thu 11/30/00	Wed 2/21/01																												
232	<b>NSWPC SPF</b>	<b>Wed 11/15/00</b>	<b>Wed 5/15/02</b>																												
233	SPF build #3	Wed 11/15/00	Wed 11/15/00																												
234	SPF build #4	Tue 5/15/01	Tue 5/15/01																												
235	SPF build #5	Thu 11/15/01	Thu 11/15/01																												
236	SPF build #6	Wed 5/15/02	Wed 5/15/02																												
237	<b>DII COE</b>	<b>Mon 4/3/00</b>	<b>Sun 4/1/01</b>																												
238	DII COE 4.2	Mon 4/3/00	Mon 4/3/00																												
239	DII COE 4.3	Mon 10/2/00	Mon 10/2/00																												
240	DII COE 4.4	Sun 4/1/01	Sun 4/1/01																												
241	<b>Broadsword</b>	<b>Mon 1/15/01</b>	<b>Mon 1/15/01</b>																												
242	V3.0	Mon 1/15/01	Mon 1/15/01																												
243	<b>Misc Activities</b>	<b>Mon 8/28/00</b>	<b>Mon 9/18/00</b>																												
244	DII COE Studies	Mon 8/28/00	Mon 9/18/00																												

Last Schedule Revision -  
9/19/02



# PTW Future Plans



- JMPS interface
  - Old CGI interface phased out as TAMPS dies out
    - At this point, PTW will only support the new XML interface
- Other
  - Joint Targeting Toolkit (JTT) requests accurately mensurated points from PTW
    - PTW 4.1.1 accomplishes this via a file directory
    - PTW 4.2 looking at an XML interface similar to JMPS
  - JAWS
  - Dynamic Target Management Service (DTMS)



# JMPS/PTW Interface Issues



- Availability of PTW 4.1.1 software
- Installation of PTW 4.1.1 for operational use
- Usability of PTW imagery by the JMPS NITF Viewer provided by Autometric



# ***JMPS/SPF Interface***

***Note: The following set of slides are from CDR Buck's NSWPC IPT Briefing, 10 Jan 03.***





# NSWPC Purpose/Charter



**ENHANCE CVBG  
TACAIR and Tomahawk  
Strike Warfare Capabilities**

**BY INTEGRATING CVIC  
Mission Planning and  
Intelligence Systems  
THROUGH USE OF SCN FUNDS  
RCOH and New Construction**

**“JOINT VISION 2010” ⇒ Network-Centric Warfare**

**Phase I (FY97-01)**

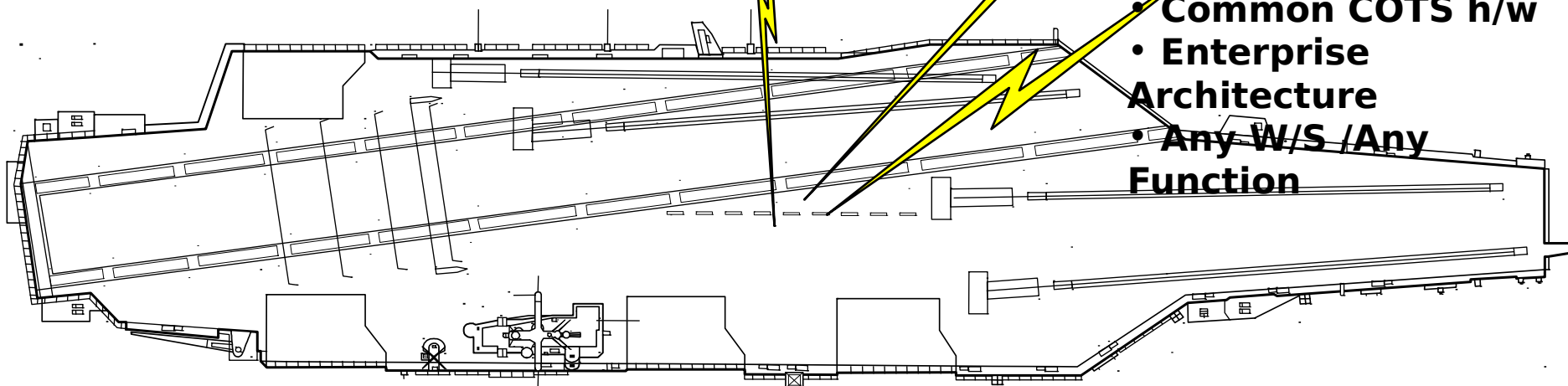
- More planning time
- Less “admin” time

**Phase II (FY98-03)**

- Time-critical Strike
- Rapid Real-time Retarget

**Phase III (FY02-07)**

- Common COTS h/w
- Enterprise Architecture
- Any W/S /Any Function



**Allow decision-makers to manage information more efficiently  
and effectively**



# NSWPC IPT



**PMS 312/378 Program**  
**NAVSEA PEO(Carriers)**

**PMA-241**  
**PEO(T)**  
*DCRS / LIGHT TABLE*

**PMA-281**  
**PEO(W)**  
*JSIPS-N/TC2S*

**PMW-157**  
**SPAWAR**  
*GCCS-M  
SVDS*

**PMW-165**  
**SPAWAR**  
*ADNS/ISNS*

**CVN & LHA**

**CVN only**

**PMW-155**  
**SPAWAR**  
*METOC*

**PMA-281**  
**PEO(W)**  
**NSWPC PARM**

**GFE/GFI**  
**Systems Engineering**  
**S/W & H/W Mods**  
**Integration & Test**



**PMA-233**  
**PEO(T)**  
*TAMPS/PFPS  
/JMPS*

**PMA-205**  
**AIR-1.1**  
*TOPSCENE*

**PMA-234**  
**PEO(T))**  
*TEAMS*

**PMA-251**  
**PEO(T))**  
*ADMACS*

NAV  AIR



# NSWPC Integration Approach



2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	➔
------	------	------	------	------	------	------	------	------	------	---

1

 <b>CVN 68</b> <b>NSWPC</b> PHASE I CVIC Integration	 <b>CVN 76/69</b> <b>NSWPC</b> PHASE II Coordinated OPS with External Organizations	 <b>CVN 70/77</b> <b>NSWPC</b> PHASE III Joint Integrated Strike Planning	 <b>CVNX</b> <b>NSWPC</b> PHASE IV Expanded O-3 Integration
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## NSWPC Capabilities

- Single CVBG
- Within CVN hull
- Unit through CAG/STK OPS
- Focus on information management

- Multiple CVBG
- Accompanying ARG/MEU
- In-theater AF units
- Focus on liaison and coordination with taskers and other theater units
- STWC Support

- Convergence of NAVAIR systems
- Common COTS H/W for CVIC
- Enterprise Architecture

- Integrated CVN Warfare System
- Expand COTS Based H/W for O-3 level



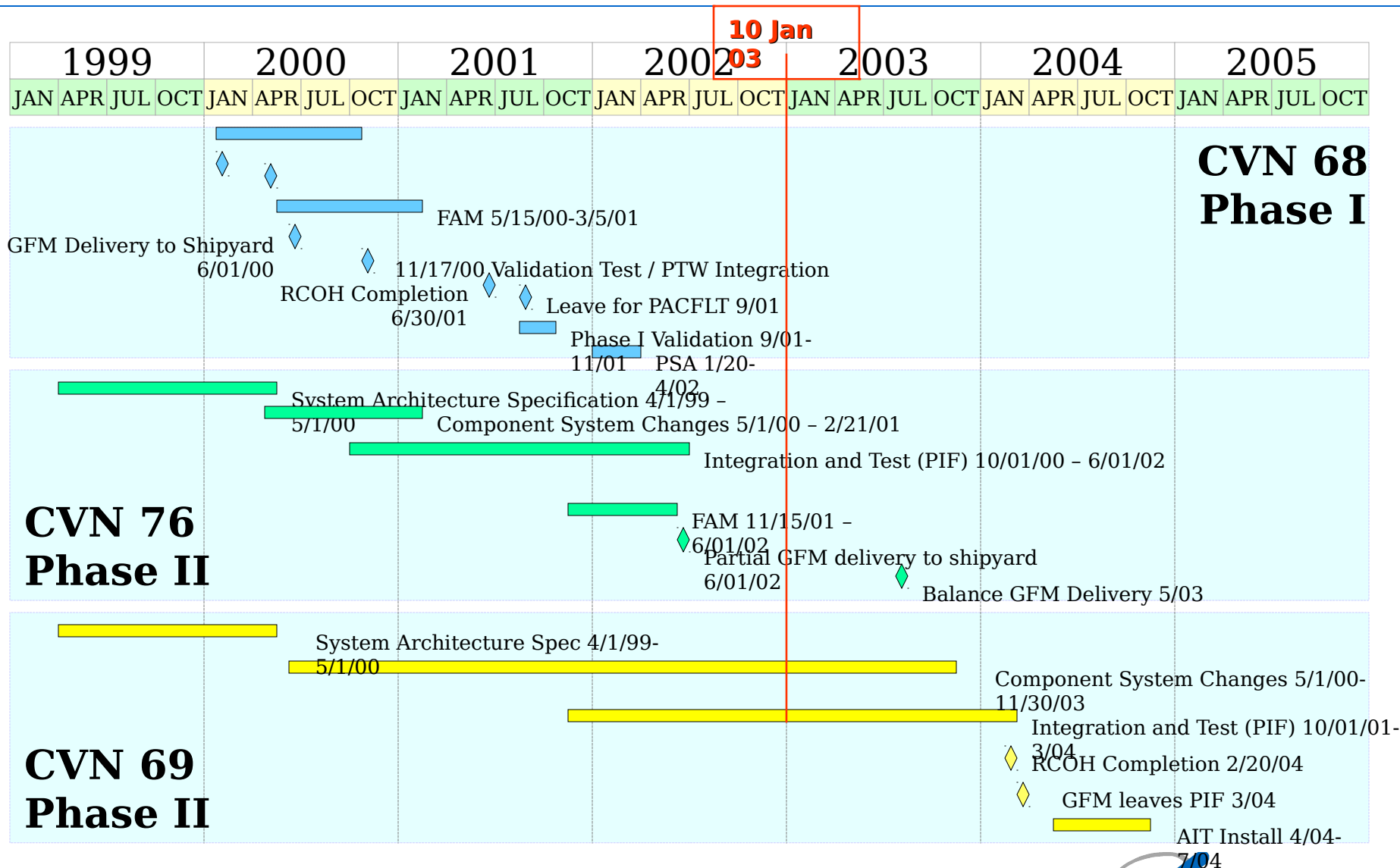
# Major Events



- 7-9 Oct 02 TOPSCENE delivered and installed
- 8-10 Oct 02 CVN 69/70 PARM Tech Summit
- 21 Oct 02 TIS 1.5 delivered to PIF
- 12 Nov 02 CVN 69/70 QPR
- 19 Nov 02 CVN 77 Plus Up Briefing
- 4 Dec 02 CVN 77 Tech Summit
- 20 Dec 02 SPF BLD 7 delivered to PIF
- 16 Dec 02 System of System Exit Brief
- 7-9 Jan 03 SPF SAT

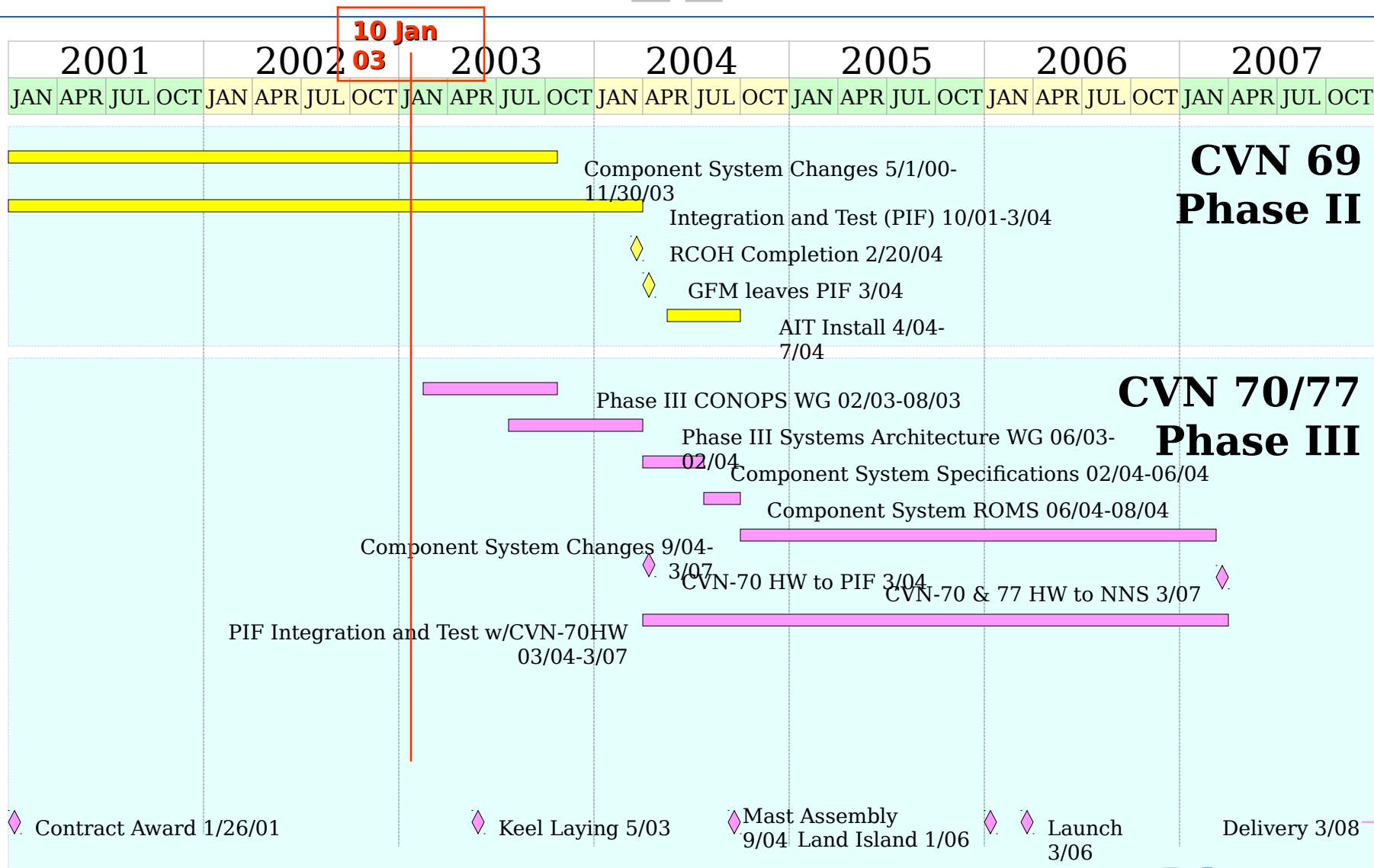


# Current NSWPC Schedules





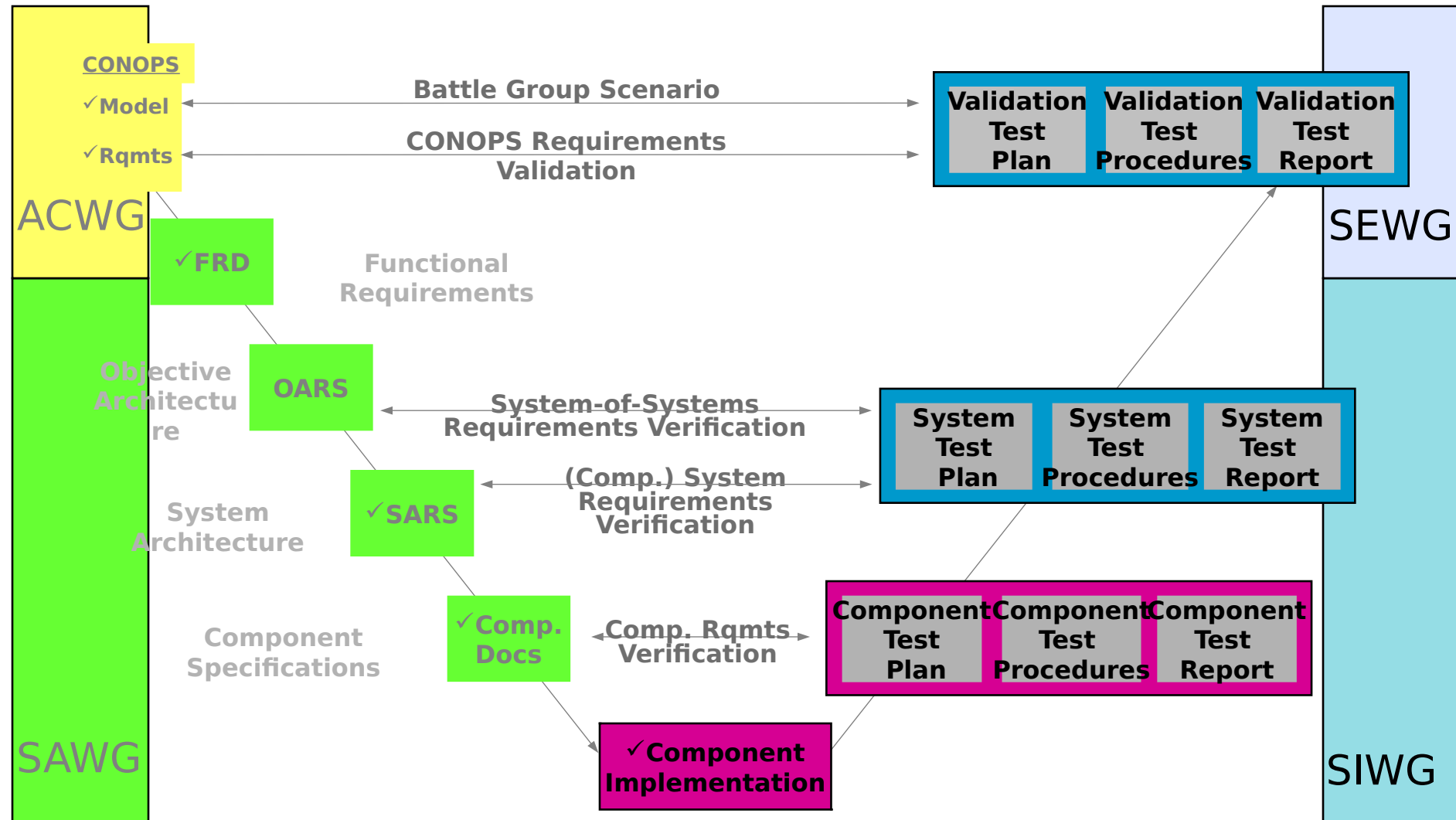
# NSWPC Schedule & CVN 21





# NSWPC Requirements

## Process Phase III (CVN 70/77)





# SPF Build 7/8/9 Status



- Scheduled releases
  - Dec '02 (B7)
  - Jun '03 (B8)
  - Nov '03 (B9)
- Build 7
  - Delivered to PIF
  - Installed on stand alone server until PTW 4.1.1 is available
  - Testing has started
- Build 8/9
  - Contract Awarded
  - Work Commencing





# FY03 SPF Events



<input checked="" type="checkbox"/>	02 Dec 02	SPF Build 7 Test Readiness Review
<input checked="" type="checkbox"/>	02-06 Dec 02	SPF Build 7 FT and IT
<input checked="" type="checkbox"/>	20 Dec 02	SPF Build 7 Delivery
<input checked="" type="checkbox"/>	23 Dec 02	SPF Build 8/9 Contract Award
<input checked="" type="checkbox"/>	06-07 Jan 03	SPF Build 7 PIF Installation
<input type="checkbox"/>	07-10 Jan 03	SPF Build 7 SAT and SIT
<input type="checkbox"/>	13 Jan-Mar 03	SPF Build 7 Integration and Test
<input type="checkbox"/>	17 Mar 03	SPF Build 8 Design Review
<input type="checkbox"/>	02 Jun 03	SPF Build 8 Test Readiness Review
<input type="checkbox"/>	03-06 Jun 03	SPF Build 8 FT and IT
<input type="checkbox"/>	13 Jun 03	SPF Build 8 Delivery
<input type="checkbox"/>	16-17 Jun 03	SPF Build 8 PIF Installation (Tentative)
<input type="checkbox"/>	17-20 Jun 03	SPF Build 8 SAT and SIT (Tentative)
<input type="checkbox"/>	23 Jun 03	SPF Build 10/11 Contract SOW First Draft (Notional)
<input type="checkbox"/>	23 Jun-Aug 03	SPF Build 8 Integration and Test (Tentative)
<input type="checkbox"/>	21 Jul 03	SPF Build 10/11 Contract SOW Final Draft (Notional)
<input type="checkbox"/>	19 Aug 03	SPF Build 9 Design Review
<input type="checkbox"/>	25 Aug 03	SPF Build 10/11 Contract Award (Notional)



# SPF Build 7 Tasks



- **TMS DTG**
- **ATO Search**
- **File Description Edit**
- **Global Data Archive**
- **Data “Valving”**
- **Overlay Route Display**
- **Multiselect**
- **Member Roles**
- **Rubber Band Zoom**
- **ATO Validation Warning**
- **Strike Timeline Tool**
- **Enhanced Map Loader**
- **Text Highlighting**
- **Tanking Correlation**
- **User Preference**
- **IFF Mode 4**
- **SEAD Node**
- **Folder Origination**
- **Origination Help**
- **Origination Admin**
- **Survivor Card**
- **CSAR Additions**
- **Mission Type**
- **Single Target**
- **ATO Text Search**
- **ACO View**
- **Folder Search**
- **User comment collection**
- **Route Colors**
- **ATO 2000 Parsing**
- **Expanded Keyboard Card**
- **METOC Interface**
- **Multi-table Access**
- **TBMCS I/F Design**



# SPF Build 7 Tasks



- **Auto Generation of Post Strike Intelligence Data**
- **ISIS Airplan Import**
- **DMPI Correlation Investigation**
- **Extended DAFIF Displays**
- **Drive to Location**
- **Center on Entity**
- **Arrow Drawing Tool**
- **IFL Report**
- **ESRI GIS Shape Files**
- **Improve Map Load**
- **Proportional Text**
- **Map Refresh Button**
- **Help Cut & Paste**
- **Map Tool Colors**
- **Range/Bearing Tool**
- **Auto-filling**
- **Direct Paste**
- **Element Card Kneeboard Card**
- **Lat/Long Copy/Paste**
- **STWC Domain**
- **TBMCS Interface**
- **ACE**



# SPF Build 8/9 JMPS MB Tasks



- **SPF JMPS Mission Binder**
  - Provide for JMPS Mission Binder (MB) support.
  - Up to 2 JMPS MB build deliveries during each SPF Build. Mission Binder Build schedules will be determined by the Government.



# SPF Build 8 Specific Tasks



- ATO/ACO handling enhancements
- Host platform/server tasks
- User communication improvements
- Time display improvements
- Required security improvement
- General usability improvement
- Basic improvements
- Error handling and robustness improvements
- Security improvements
- Engineering studies for future enhancements



# SPF Build 9 Specific Tasks



- ATO/ACO handling enhancements
- Security improvements
- Timeline Tool improvements
- Map Loader improvements
- GCCS interface improvements and enhancements
- User friendliness improvements
- Strike Warfare Commander improvements
- Map Tool enhancement
- User communication improvement
- Engineering studies for exploring future enhancements



# SPF Build 10+ (Tentative)



- External System Configuration Encapsulation Implementation
- Componentization Implementation
- SPF Update Notification Implementation
- SPF Data Synchronization Implementation
- SPF JMPS UPC Interface Implementation
- Full SPF DB for JMPS Implementation
- Enterprise Architecture Implementation
- TC2S Integration Implementation
- Copy Commands Standardization
- Upgrade PTW/SPF Interface to Use XML
- Electronic Import of ADMACS Airplan



# ***JMPS/WXI (METCAST) Interface***





# ***Summary***



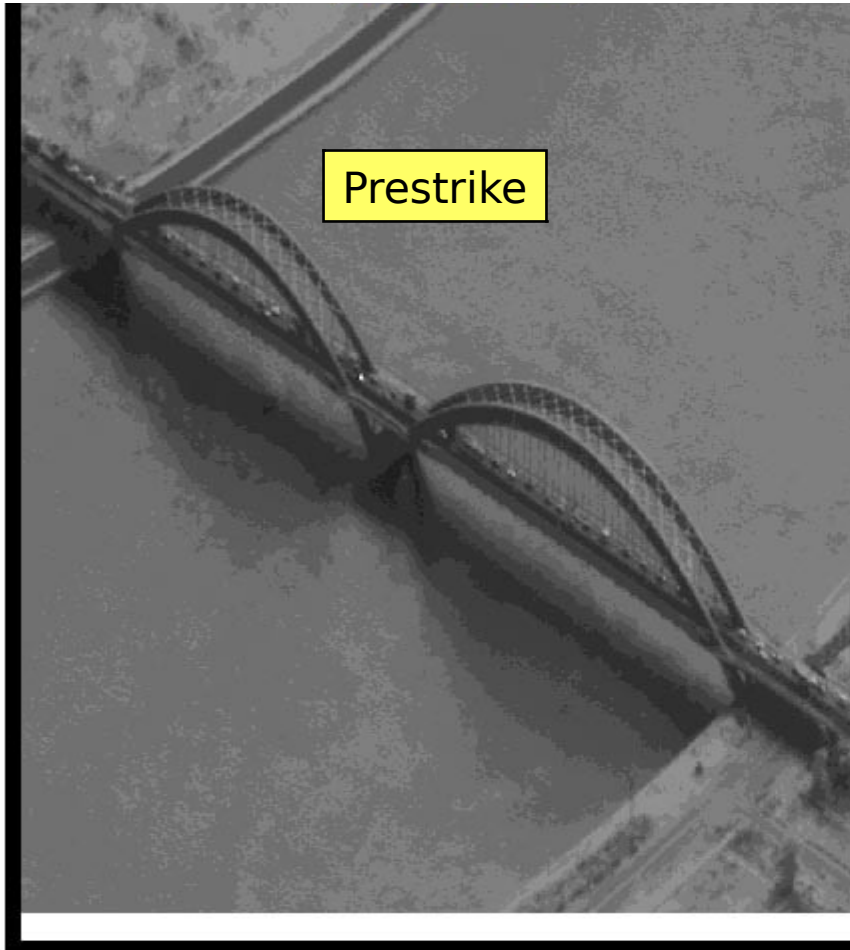
# Summary



- External Interface
  - System/Data that is not packaged as part of JMPS Framework, Common Components, or UPCs
- External Dependencies
  - Within each external interface, there can be dependencies
- External Interface 'Virtual' Team
  - Ancina is the Cat Herder
  - Various NAVAIR team members are the SMEs
  - Tester may or not be the technical SME
- Why worry about External Interfaces?
  - Ultimately, the JMPS user will suffer if we don't
  - Potential failure during OT



# In case we forget what we plan for...



Prestrike



Post-strike